

Test date
Customer ID No.

4/19/2020 Time: 12:05:33 AM

Job. no.: _____

Serial no.: _____

ASSEMBLY UND CUSTOMER DATA**ASSEMBLY DATA**

Edition 08.09.93
Combination no. 0 403 245 025
Fuel-injection pump
Pump designation PES5MW55/320RS16-1
Governor
Controller designation RW375/2200MW28-3

CUSTOMER DATA

Customer MERCEDES BENZ
Engine 617 A - USA
Power 92.0 kW

TEST PREREQUISITES

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	Test oil		ISO-4113				
	Calibrating oil inlet temp.	°C	40.0	38.0	42.0		
	Overflow restrictor (type number)		1 417 413 012				
	Inlet press.	bar	1.00	1.00	1.00		
	Test nozzle holder assembly		0 681 343 009				
	Opening pressure	bar	173.5	172.0	175.0		
	Test pressure line		1 680 750 014				
	Outside diameter	mm	6.00				
	x Inside diameter	mm	2.00				
	x Length	mm	600				

**INJECTION PUMP SETTINGS
START OF DELIVERY**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	Test pressure	bar	26.0	20.0	32.0		
D	Rack travel	mm	21.00	19.50	22.50		
S	Prestroke (as of BDC)	mm	2.15	2.10	2.20		
C	Prestroke (as of BDC)	mm	2.15	2.05	2.25		
	Cam sequence		1- 2- 4- 5- 3				
	Port-closing difference	°NW	0-72-144-216 288				
S	Tolerance	°NW	+ - 0.50				
	Cylinder 1	°NW	0				
	Cylinder 2	°NW	72	71.5	72.5		
	Cylinder 4	°NW	144	143.5	144.5		
	Cylinder 5	°NW	216	215.5	216.5		
	Cylinder 3	°NW	288	287.5	288.5		
C	Check tolerance	°NW	+ - 0.75				
	Start of delivery mark						
	Barrel no.		1				

BASIC SETTING

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	SETTING						
D	speed	rpm	1000			1000	
D	Rack travel	mm	13.55	13.50	13.60		
S	Delivery	cm ³ /1000S.	51.50	51.00	52.00		
S	Spread	cm ³ /1000S.	2.50				
D	speed	rpm	365			365	
D	Rack travel	mm	5.75	5.70	5.80		
S	Delivery	cm ³ /1000S.	10.50	10.00	11.00		
S	Spread	cm ³ /1000S.	5.0				

Customer ID No.
Combination ID No.

0403245025

SETTINGS FOR INJECTION PUMP WITH GOVERNOR FULL-LOAD DELIVERY

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	speed	rpm	1000			1000	
D	Aneroid pressure	hPa	1733			1733	
S	Delivery	cm ³ /1000S.	51.50	51.00	52.00		
C	Delivery	cm ³ /1000S.	51.50	50.00	53.00		
S	Spread	cm ³ /1000S.	2.50				
C	Spread	cm ³ /1000S.	3.00				

FULL-LOAD SPEED REGULATION/ASSEMBLY GOVERNOR

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	Control lever position	°	34.5	0.0	69.0		
	FULL-LOAD SPEED REGULATION						
D	Rack travel	mm	0..1			0..1	
S	speed	rpm	2950	2950	2950		
D	Rack travel	mm	12.1...1	2950.000	2950.000		
S	speed	rpm	2180				
D	Rack travel	mm	11.2			11.2	
S	speed	rpm	2300..	2950.0	2950.0		
D	Rack travel	mm	4.00			4.00	
S	speed	rpm	2670.0	2620.0	2720.0		

IDLE

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	Control lever position	°	29.0	27.0	31.0		
	IDLE WITHOUT AUXILIARY SPRING						
D	speed	rpm	365			365	
S	Rack travel	mm	5.75	5.70	5.80		
D	speed	rpm	100			100	
S	CRT min.	mm	11.0				
C	CRT min.	mm	11.0				
	TESTING						
S	Rack travel	mm	5.75	5.70	5.80		
D	speed	rpm	320			320	
S	CRT max.	mm	11.0				
	IDLE WITH AUXILIARY SPRING						
S	Rack travel	mm	535.0	520.0	550.0		

TORQUE CONTROL

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	speed	rpm	1000			1000	
S	Rack travel	mm	13.55	13.50	13.60		
C	Rack travel	mm	13.55	13.50	13.60		
D	speed	rpm	1600			1600	
S	Rack travel	mm	13.20	13.10	13.30		
C	Rack travel	mm	13.20	13.10	13.30		
D	speed	rpm	2180			2180	
S	Rack travel	mm	12.20	12.10	12.30		
C	Rack travel	mm	12.20	12.10	12.30		

BOOST-PRESSURE DEPENDENT FULL-LOAD STOPT

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	SETTING						
D	speed	rpm	1000			1000	
D	Pressure	hPa	1400			1400	
S	Rack travel	mm	0.55	0.40	0.70		
	TESTING						
D	speed	rpm	1000			1000	
D	Pressure	hPa	1067			1067	
S	Rack travel	mm	2.70	2.50	2.90		
D	speed	rpm	1000			1000	
D	Pressure	hPa	747			747	
S	Rack travel	mm	4.95	4.70	5.20		

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CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	Pressure	hPa	0			0	
FUEL DELIVERY CURVE							
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	Aneroid pressure	hPa	1733			1733	
D	speed	rpm	1600			1600	
S	Delivery	cm3/1000S.	52.25	51.50	53.00		
C	Delivery	cm3/1000S.	52.25	50.50	54.00		
S	Spread	cm3/1000S.	2.50				
C	Spread	cm3/1000S.	3.00				
D	Aneroid pressure	hPa	1067			1067	
D	speed	rpm	1000			1000	
S	Delivery	cm3/1000S.	42.00	41.00	43.00		
C	Delivery	cm3/1000S.	42.00	40.00	44.00		
S	Spread	cm3/1000S.	2.50				
C	Spread	cm3/1000S.	3.00				
STARTING FUEL DELIVERY							
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	speed	rpm	100			100	
D	Rack travel	mm	21.00	20.50	21.50		
S	Delivery	cm3/1000S.	27.50	0.00	55.00		
C	Delivery	cm3/1000S.	27.50	1.50	53.50		
IDLE DELIVERY							
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
D	speed	rpm	365			365	
S	Delivery	cm3/1000S.	10.50	10.00	11.00		
C	Delivery	cm3/1000S.	10.50	8.50	12.50		
S	Spread	cm3/1000S.	5.0				
C	Spread	cm3/1000S.	15.0				

CAT = Category (D = Default, S = Setting value, C = Check value)
OT = Outside Tolerance (X is set)